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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,256	11/02/2001	Kazuaki Watanabe	U 013698-2	8327

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,256

Applicant(s)

WATANABE ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichizawa et al. (U.S. 6,368,397).

Ichizawa et al. disclose ink jet ink comprising water, glycol ether, acetylene glycol, pigment, and aqueous polymer obtained from monomers including those with SO₃H group such as vinylsulfonic acid wherein the polymer possesses acid value of 100-500 and obtained from monomers such as (meth)acrylic acid wherein the polymer possesses acid number of 100-800. The aqueous polymers function as dispersants for the pigment and are used alone or in combination with one another. The ink is printed using ink jet printer to produce a printed image (col.4, lines 22-29, col.9, lines 6-10, 27-29, 40-45, and 49-52. col.10, lines 15-24 and 40-42, col.11, line 4, col.12, lines 5-6, and col.17, lines 65-67). Although there is no disclosure of ink cartridge containing the ink, it is clear that an ink jet printer would inherently contain the ink in an ink cartridge prior to printing.

In light of the above, it is clear that Ichizawa et al. anticipate the present claims.

3. Claims 1-6 and 8-10 rejected under 35 U.S.C. 102(b) as being anticipated by Yui et al. (U.S. 5,977,207).

Yui et al. disclose ink jet ink comprising water, glycol ether, acetylene alcohol, pigment, and two dispersants. One dispersant is sulfonic-based and is obtained from monomers such as vinyl sulfonic acid and styrene sulfonic acid while the other dispersant is carboxyl-based, is obtained from monomers such as (meth)acrylic acid, and possesses acid number of, for instance, 350. The ink is printed using ink jet printer to produce a printed image (col.2, lines 26-30 and 35-36, col.4, lines 29-49, col.6, lines 12-13 and 30, col.7, lines 9-18, and col.12, line 9). Although there is no disclosure of ink cartridge containing the ink, it is clear that an ink jet printer would inherently contain the ink in an ink cartridge prior to printing.

In light of the above, it is clear that Yui et al. anticipate the present claims.

4. Claims 1, 3-6, 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Doi et al. (U.S. 6,378,999).

Doi et al. disclose ink jet ink comprising water, pigment, glycol ether, acetylene glycol, and dispersant obtained from monomers such as vinyl sulfonic acid, styrene sulfonic acid, and (meth)acrylate which possesses acid number of 100-800. The ink is printed using ink jet printer to produce a printed image (col.1, lines 5-7, col.2, lines 23-25, col.5, lines 50-57, col.6, lines 10-15, 33-34, and 43-45, col.7, lines 5 and 45, col.9, lines 65, col.10, lines 28-29, col.16, lines 44-

51, and examples 9-10). Although there is no disclosure of ink cartridge containing the ink, it is clear that an ink jet printer would inherently contain the ink in an ink cartridge prior to printing.

In light of the above, it is clear that Doi et al. anticipate the present claims.

5. Claims 1-3, 6, and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11217525.

Pending formal translation, and using a machine translation of the reference, it is noted that JP 11217525 discloses ink jet ink comprising water, glycol ether, pigment, dispersant, and polymer emulsion prepared by sulfonating diene-based polymer with sulfonating agent such as sulfuric acid or sulfuric anhydride. The ink is printed using ink jet printer to produce a printed image (abstract and paragraphs 5-6, 9-10, 12, 29-30, 39, and 42). Although there is no disclosure of ink cartridge containing the ink, it is clear that an ink jet printer would inherently contain the ink in an ink cartridge prior to printing.

In light of the above, it is clear that JP 11217525 anticipates the present claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichizawa et al. (U.S. 6,368,397), Yui et al. (U.S. 5,977,207), Doi et al. (U.S. 6,378,999), and JP 11217525 any of which in view of either Sano et al. (U.S. 5,769,930) or Yatake et al. (U.S. 6,454,846).

The disclosures with respect to Ichizawa et al., Yui et al., Doi et al., and JP 11217525 in paragraphs 2, 3, 4, and 5, respectively, are incorporated here by reference.

The difference between Ichizawa et al., Yui et al., Doi et al., or JP 11217525 and the present claimed invention is the requirement in the claims of specific penetrating agent.

Sano et al., which is drawn to ink jet ink, disclose the use of penetrating agent that is combination of acetylene glycol and triethylene glycol monobutyl ether (col.8,line 62-col.9, line 4).

Alternatively, Yatake et al., which is drawn to ink jet ink, disclose using combination of acetylene glycol and triethylene glycol monobutyl ether in order to increase solubility of the ink (col.5, lines 37-45).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use combination of acetylene glycol and triethylene glycol monobutyl ether in the ink jet ink of either Ichizawa et al., Yui et al., Doi et al., or JP 11217525, and thereby arrive at the claimed invention.

9. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anton et al. (U.S. 5,912,280) in view of either Sano et al. (U.S. 5,769,930) or Yatake et al. (U.S. 6,454,846).

Anton et al. disclose ink jet ink comprising water, pigment, dispersant, and polymer emulsion obtained from sulfonyl group containing monomers. The ink is printed using ink jet printer to produce a printed image (col.1, line 5, col.2, lines 16-17 and 42, col.3, lines 29-31, col.5, lines 7-9 and 45-53, and col.16, lines 51-52). Although there is no disclosure of ink cartridge containing the ink, it is clear that an ink jet printer would inherently contain the ink in an ink cartridge prior to printing.

The difference between Anton et al. and the present claimed invention is the requirement in the claims of penetrating agent.

Sano et al., which is drawn to ink jet ink, disclose the use of penetrating agent, which is combination of acetylene glycol and triethylene glycol monobutyl ether (col.8,line 62-col.9, line 4).

Alternatively, Yatake et al., which is drawn to ink jet ink, disclose using combination of acetylene glycol and triethylene glycol monobutyl ether in order to increase solubility of the ink (col.5, lines 37-45).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use combination of acetylene glycol and triethylene glycol monobutyl ether in the ink jet ink of Anton et al. and thereby arrive at the claimed invention.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida et al. (U.S. 5,702,510) discloses aqueous ink comprising pigment, glycol ether, and dispersant obtained from monomers including allylsulfonic acid.

Listigovers et al. (U.S. 5,760,124) disclose ink jet ink comprising water, pigment, and dispersant such as (styrene-co-butadiene)-b-(styrene sulfonate).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu-Jagannathan can be reached on 703-306-2777. The fax phone numbers for the

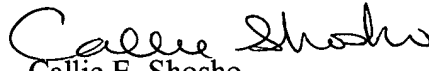
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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
June 28, 2003
